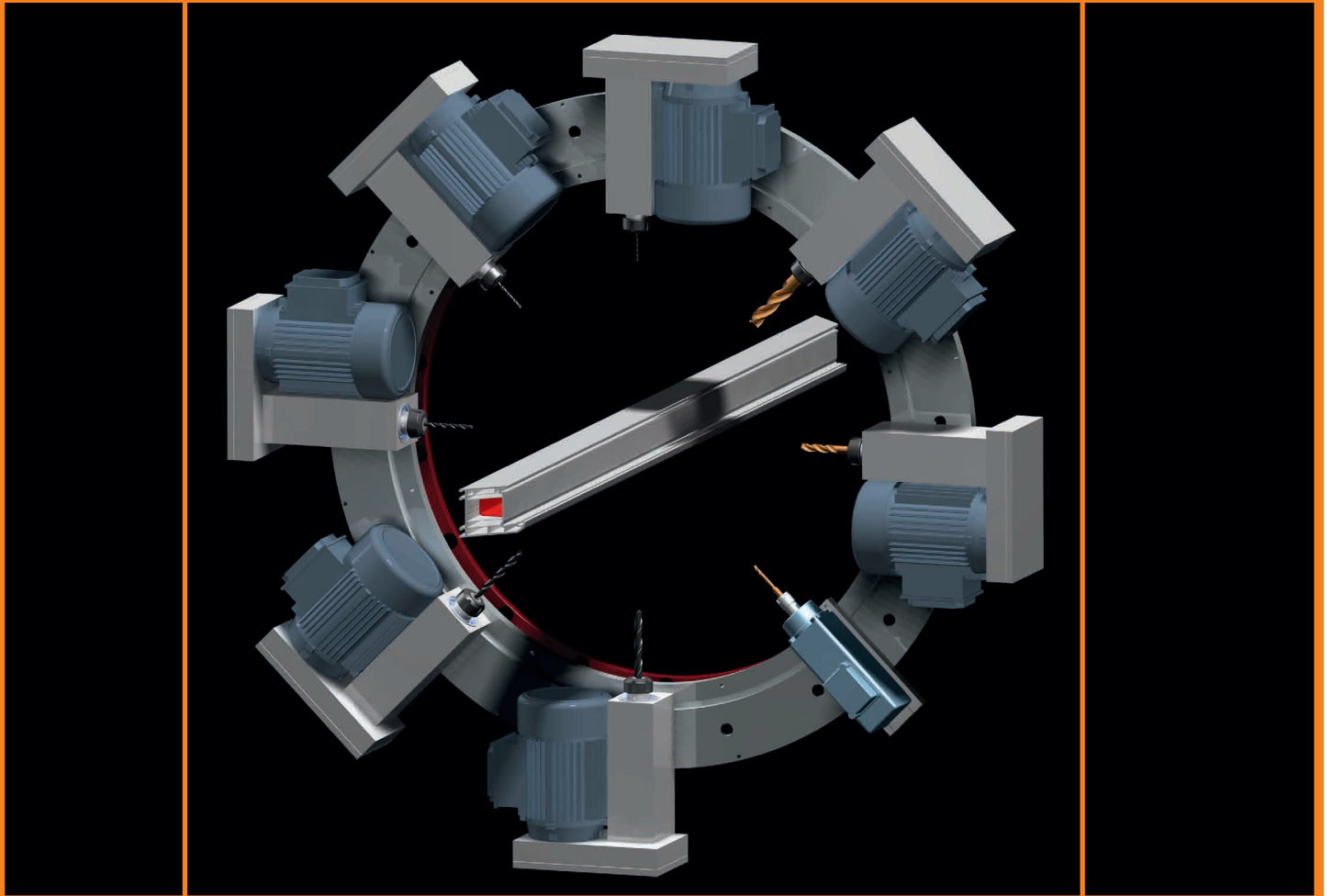


**We have set new standards in the machining of profiles.
With the PBZ Profile Machining Centre.**



THORWESTEN
Convincing technology.

We can increase your productivity in the production of windows and entrance doors. Noticeably!

In order to carry out the entire machining of all profile types in window and entrance door production in one operation, we mounted all machining units on a turntable that can be positioned from 0° to 360°. Thanks to this design solution, all machining steps are carried out under CNC control in only one operation with maximum precision, since all aggregates are controlled by digital frequency converters. The use of drilling jigs and positioning aids is no longer necessary.



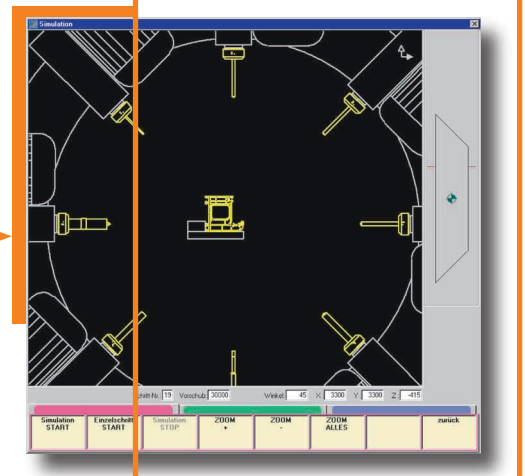
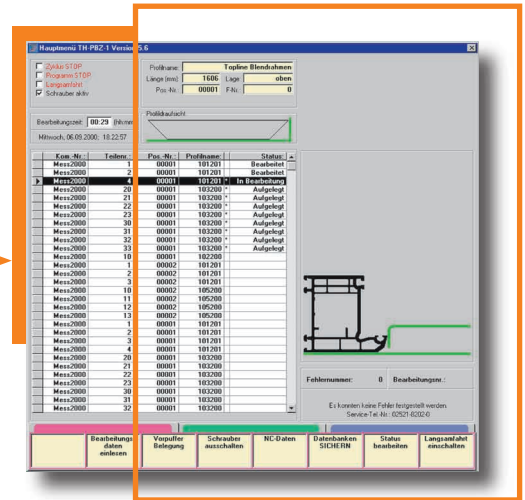
In the modular machining centre, all important components such as controller, monitor-based user interface, scanner as well as infeed and exit transport buffer are logically arranged. The superstructure of the PBZ profile machining centre is accessible from all sides, thus guaranteeing fast tool changes, as well as easy maintenance and repair.

Thanks to the freely programmable machining steps made possible by sophisticated software, there are no limits to the variety of machining options. It goes without saying that the PBZ can easily be integrated in existing networks. Individual profile machining processes, new profiles or complete profile systems are programmed by our application engineers at our customers' request and transmitted directly into the machine controller by means of remote maintenance software.

When perfect results count, we do not carry out any experiments!



The many different machining options for the profiles as well as the processing of all common profile lengths allows rational production in all sizes of factory in the window and entrance door manufacturing sector. Whether the work is optimised according to program, carried out randomly as required, profile or order-specifically, consignment-specifically or as single pieces, the freely programmable jaw position makes it possible to machine any profile cross-section without change-over times.



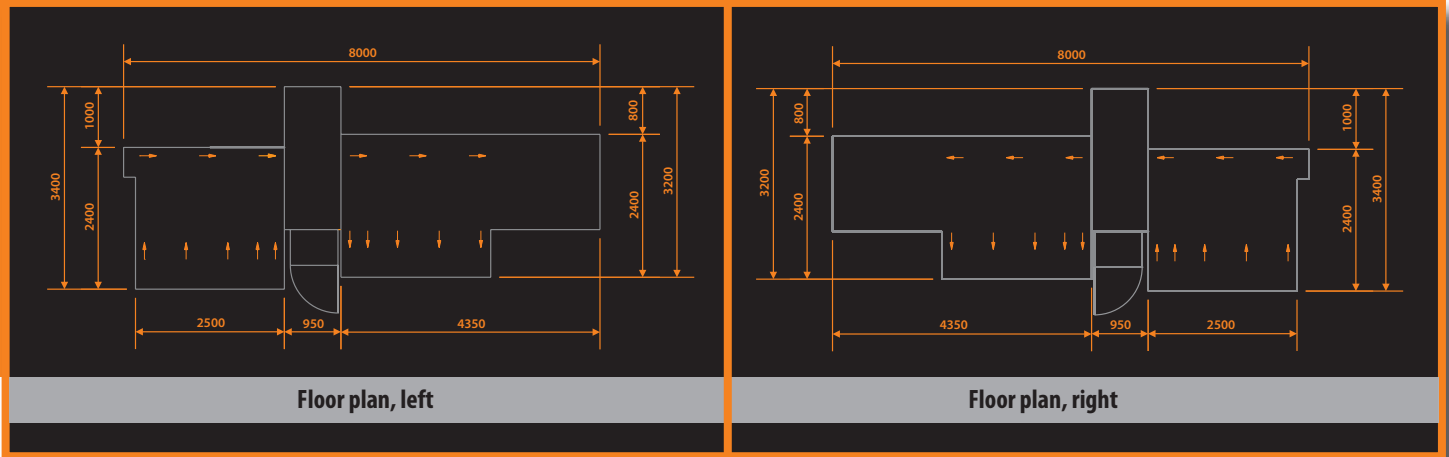
Operation is effected with the help of a cleartext display. The data are created in a window construction program, then read in on a job-specific basis, the staff-specific data are visually displayed and are identified with the help of the integrated scanner. Depending on the fittings, the drill images required are managed as a sub-program in the machine controller. They can easily be reprogrammed. The visual simulation on the screen permits exact control of the program changes carried out and rules out manual operating errors.



Loading and removal - the profiles are transported automatically via a feed magazine and an exit transport buffer – the selection of the profile data with the help of a scanner is the only manual activity left. Profile identification guarantees the exact execution of the defined machining steps. The speed of the machining steps is individually adjustable.

If a fault should occur despite maximum precision and reliability, it is diagnosed with the help of a monitor and a detailed graphic display. Thanks to the visual representation of the source of the fault, the operator knows immediately where the fault has to be remedied. However, fault detection and maintenance may also be carried out online with the help of the integrated remote maintenance software. Through the use of all modern means of communication, such as telecommunication in this case, we are always there for our customers whenever they need our help.

You do not need to build any new halls to be able to make the most of all of the advantages.



A summary of the technical highlights:

- all machining units are continuously programmable
- positioning by means of CNC-controlled servo axles
- no profile junctions required
- modest space requirements
- controlled by a diskless industrial PC (Windows XP)
- 15" touch-screen monitor
- graphic fault diagnostics
- maintenance menus
- online connection
- individual profiles or profile systems can be retrofitted online at any time

Machining for window profiles:

- screw connections of the aluminium-steel reinforcements with automatic screw guide
- milled/drilled drainage holes*
- milled/drilled ventilation holes*
- milled/drilled forced ventilation holes*
- drilled plug holes**
- drilled transom holes in the window frame**
- transverse drilled transom holes
- edge plate holes in the window frame/transom**
- drilled corner strap holes in the casement
- drilled corner bearing holes in the window frame/transom**
- scissor bearing holes in the window frame/transom**
- drilled olive holes**
- drilled nipple holes in the roller shutter guide strips**
- drilled weatherboard hole

Machining for entrance door profiles:

- lock case recesses
- drilled latch holes**
- drilled/milled holes for closing cylinders*
- recessed slots in the window frame/transom*
- drilled strap holes in the casement/window frame/mullion**
- carrying loop holes in the window frame/transom**
- milled holes for letterbox*
- drilled/milled holes for electric door opener
- drilled weatherboard holes**
- milled holes for sealing groove with retracted seal
- special machining

* = Plastic

** = Aluminium-steel reinforcement

Subject to technical alterations

THORWESTEN
Convincing technology.

Thorwesten Maschinenbau GmbH

Daimlerring 45 • D-59269 Beckum

Tel.: +49(0)25 21/82 02-0 • Fax: +49(0)25 21/82 02-22

www.thorwesten.net • E-Mail: info@thorwesten.net